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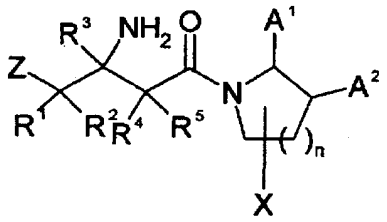
Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A compound of formula (I)



(I)

or a pharmaceutically acceptable salt thereof, wherein

Z is selected from the group consisting of
phenyl;
naphthyl;
C_{3-7} cycloalkyl;
heterocycle; and
heterobicycle;
wherein Z is optionally substituted with one, or independently from each other, more of
halogen;
CN;
OH;
=O, where the ring is at least partially saturated;
C_{1-6} alkyl, optionally substituted with one or more F; and
O-C_{1-6} alkyl, optionally substituted with one or more F;

R^1, R^2, R^4, R^5 are independently from each other selected from the group consisting of
H;
F;

OH;

C_{1-6} alkyl, optionally substituted with one or more F; and

O-C_{1-6} alkyl, optionally substituted with one or more F;

and/or R^1 and R^2 optionally form together C_{3-7} cycloalkyl, which is optionally substituted with one or more F;

and/or R^2 and R^3 optionally form together C_{3-7} cycloalkyl, which is optionally substituted with one or more F;

and/or R^3 and R^4 optionally form together C_{3-7} cycloalkyl, which is optionally substituted with one or more F;

and/or R^4 and R^5 optionally form together C_{3-7} cycloalkyl, which is optionally substituted with one or more F;

R^3 is H or C_{1-6} alkyl;

X is selected from the group consisting of

H;

F; and

C_{1-6} alkyl, optionally substituted with one or more F;

n is 0, 1 or 2;

A^1, A^2 are independently from each other selected from the group consisting of

H;

halogen;

C_{1-6} alkyl, optionally substituted with one or more F; and

R^6; provided that one of A^1 and A^2 is R^6;

R^6 is -$C(R^7R^8)$-Y-T;

R^7, R^8 are independently from each other selected from the group consisting of

H;

F; and

C_{1-6} alkyl, optionally substituted with one or more F;

and/or R^7 and R^8 optionally form together C_{3-7} cycloalkyl, which is optionally substituted with one or more F;

Y is selected from the group consisting of

-O-;

-C_{1-6} alkyl-O-;

-N(R^9)-;

-C_{1-6} alkyl-N(R^9)-

-S-;

-C_{1-6} alkyl-S-;

-S(O)-;

-C_{1-6} alkyl-S(O)-;

-$S(O)_2$-; and

-C_{1-6} alkyl-$S(O)_2$-;

wherein each C_{1-6} alkyl is optionally substituted with one or more F;

R^9, T are independently from each other T^1-T^2 or T^2;

T^1 is selected from the group consisting of

-C_{1-6} alkyl-;

-C_{1-6} alkyl-O-

-C_{1-6} alkyl-N(R^{10})-

-C(O)-;

-C(O)-C_{1-6} alkyl-;

-C(O)-C_{1-6} alkyl-O-;

-C(O)-C_{1-6} alkyl-N(R^{10})-;

-C(O)O-;

-C(O)O-C_{1-6} alkyl-;

-C(O)O-C_{1-6} alkyl-O-;

-C(O)O-C_{1-6} alkyl-N(R^{10})-;

-C(O)N(R^{10})-;

-C(O)N(R^{10})-C_{1-6} alkyl-;

-C(O)N(R^{10})-C_{1-6} alkyl-O-;

-C(O)N(R^{10})-C_{1-6} alkyl-N(R^{11})-;

-$S(O)_2$-;

-$S(O)_2$-C_{1-6} alkyl-;

-$S(O)_2$-C_{1-6} alkyl-O-; and

-$S(O)_2$-C_{1-6} alkyl-N(R^{10})-;

wherein each C_{1-6} alkyl is optionally substituted with one or more F;

R^{10}, R^{11} are independently from each other H or C_{1-6} alkyl, optionally substituted with one or more F;

T^2 is selected from the group consisting of

H;

CF_3;

phenyl;

naphthyl;

wherein phenyl and naphthyl are optionally substituted with one, or independently from each other, more of

halogen;

CN;

R^{12};

COOH;

OH;

$C(O)NH_2$;

$S(O)_2NH_2$;

$COOT^3$;

OT^3;

$C(O)NHT^3$;

$S(O)_2NHT^3$; or

T^3;

C_{3-7} cycloalkyl;

heterocycle; and

heterobicycle;

wherein C_{3-7} cycloalkyl, heterocycle and heterobicycle are optionally substituted with one, or independently from each other, more of

halogen;

CN;

R^{13};

OH;

=O, where the ring is at least partially saturated;

NH_2

COOH;

$C(O)NH_2$;

$S(O)_2NH_2$;

$COOT^3$;

OT^3;

$C(O)NHT^3$;

$S(O)_2NHT^3$;

NHT^3; or

T^3;

whereby when R^9 is T^1-T^2 and represents -C_{1-6} alkyl and T is T^1-T^2 and represents -C_{1-6} alkyl then R^9 and T may form together a 3 to 7 membered cyclic group containing 1 N;

R^{12} is selected from the group consisting of

C_{1-6} alkyl;

O-C_{1-6} alkyl;

COO-C_{1-6} alkyl;

OC(O)- C_{1-6} alkyl;

$C(O)N(R^{15})$- C_{1-6} alkyl;

$S(O)_2N(R^{17})$-C_{1-6} alkyl;

S(O)-C_{1-6} alkyl;

$S(O)_2$-C_{1-6} alkyl; and

$N(R^{18})S(O)_2$-C_{1-6} alkyl;

wherein each C_{1-6} alkyl is optionally substituted with one, or independently from each other, more of F, $COOR^{19}$, $C(O)N(R^{20}R^{21})$, $S(O)_2N(R^{22}R^{23})$, OR^{24}, $N(R^{25}R^{26})$, T^3, $O\text{-}T^3$ or $N(R^{27})\text{-}T^3$;

R^{13} is selected from the group consisting of

C_{1-6} alkyl;

$O\text{-}C_{1-6}$ alkyl;

$N(R^{14})\text{-}C_{1-6}$ alkyl;

$COO\text{-}C_{1-6}$ alkyl;

$OC(O)\text{-}C_{1-6}$ alkyl;

$C(O)N(R^{15})\text{-}C_{1-6}$ alkyl;

$N(R^{16})\text{-}C(O)\text{-}C_{1-6}$ alkyl;

$S(O)_2N(R^{17})\text{-}C_{1-6}$ alkyl;

$S(O)\text{-}C_{1-6}$ alkyl;

$S(O)_2\text{-}C_{1-6}$ alkyl; and

$-N(R^{18})S(O)_2\text{-}C_{1-6}$ alkyl;

wherein each C_{1-6} alkyl is optionally substituted with one, or independently from each other, more of F, $COOR^{19}$, $C(O)N(R^{20}R^{21})$, $S(O)_2N(R^{22}R^{23})$, OR^{24}, $N(R^{25}R^{26})$, T^3, $O\text{-}T^3$ or $N(R^{27})\text{-}T^3$;

R^{14}, R^{15}, R^{16}, R^{17}, R^{18}, R^{19}, R^{20}, R^{21}, R^{22}, R^{23}, R^{24}, R^{25}, R^{26}, R^{27} are independently from each other H or C_{1-6} alkyl;

T^3 is selected from the group consisting of

phenyl;

naphthyl;

wherein phenyl and naphthyl are optionally substituted with one, or independently from each other, more of

halogen;

CN;

COOH;

OH;

$C(O)NH_2$;

$S(O)_2NH_2$;

C_{1-6} alkyl;

O-C_{1-6} alkyl;

COO-C_{1-6} alkyl;

OC(O)- C_{1-6} alkyl;

$C(O)N(R^{28})$- C_{1-6} alkyl;

$S(O)_2N(R^{29})$-C_{1-6} alkyl;

$S(O)_2$-C_{1-6} alkyl; or

$N(R^{30})S(O)_2$-C_{1-6} alkyl;

heterocycle;

heterobicycle; and

C_{3-7} cycloalkyl;

wherein C_{3-7} cycloalkyl, heterocycle and heterobicycle are optionally substituted with one, or independently from each other, more of

halogen;

CN;

OH;

=O, where the ring is at least partially saturated;

NH_2

COOH;

$C(O)NH_2$;

$S(O)_2NH_2$;

C_{1-6} alkyl;

O-C_{1-6} alkyl;

$N(R^{31})$-C_{1-6} alkyl;

COO-C_{1-6} alkyl;

OC(O)- C_{1-6} alkyl;

$C(O)N(R^{32})$- C_{1-6} alkyl;

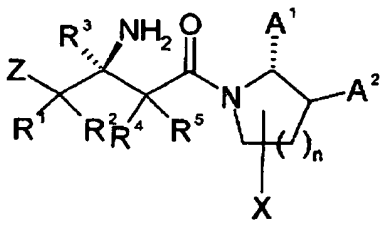
$N(R^{33})$-C(O)-C_{1-6} alkyl;

$S(O)_2N(R^{34})$-C_{1-6} alkyl;

$S(O)_2$-C_{1-6} alkyl; or

$-N(R^{35})S(O)_2$-C_{1-6} alkyl.

2. (Original) A compound according to claim 1 of formula (Ia)



(Ia)

or a pharmaceutically acceptable salt thereof, wherein Z, R^1-R^5, A^1, A^2, n and X have the meaning as indicated in claim 1.

3. (Previously presented) A compound according to claim 1, wherein Z is phenyl or heterocycle and Z is optionally substituted independently from each other with up to 2 of Cl, F, CN, CH_3 or OCH_3.

4. (Previously presented) A compound according to claim 1, wherein R^1, R^2, R^4, R^5 are independently from each other selected from the group consisting of H, F, OH CH_3, OCH_3.

5. (Previously presented) A compound according to claim 1, wherein R^3 is H.

6. (Previously presented) A compound according to claim 1, wherein X is H, F or CH_3.

7. (Previously presented) A compound according to claim 1, wherein n is 1.

8. (Previously presented) A compound according to claim 1, wherein A^1 is R^6 and A^2 is H, F or CH_3.

9. (Previously presented) A compound according to claim 1, wherein R^6 is $-CH_2$-Y-T.

10. (Previously presented) A compound according to claim 1, wherein Y is -O-, $-N(R^9)$- or $-S(O)_2$-.

11. (Previously presented) A compound according to claim 1, wherein R^9 is selected from the group consisting of H, CH_3, COOH, $COOCH_3$, $C(O)NH_2$, $C(O)N(CH_3)_2$, and $S(O)_2CH_3$.

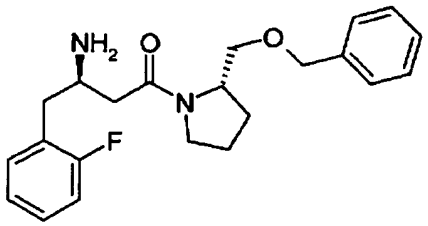
12. (Previously presented) A compound according to claim 1, wherein T is T^1-T^2 or T^2 and wherein T^1 is selected from the group consisting of
-CH_2-;
-C(O)-;
-C(O)-CH_2-;
-C(O)O-;
-C(O)O-CH_2-;
-C(O)NH-;
-C(O)NH-CH_2-;
-$S(O)_2$-; and
-$S(O)_2$-CH_2-.

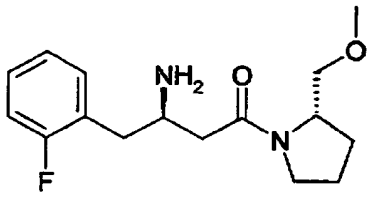
13. (Original) A compound according to claim 12, wherein T is T^1-T^2 or T^2 and wherein T^1 is selected from the group consisting of -C(O)-; -CH_2-; -$S(O)_2$-; and -C(O)NH-.

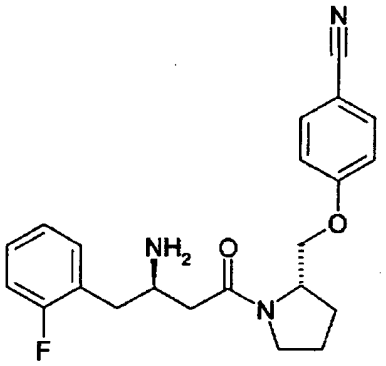
14. (Previously presented) A compound according to claim 1, wherein R^6 is -CH_2-N(R^{36})-T, and wherein R^{36} is H or $S(O)_2CH_3$.

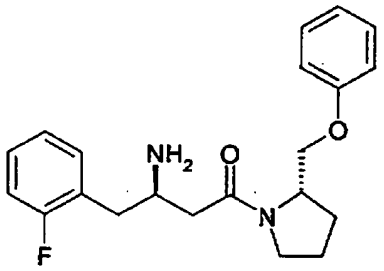
15. (Previously presented) A compound according to claim 1, wherein T^2 is phenyl or heterocycle.

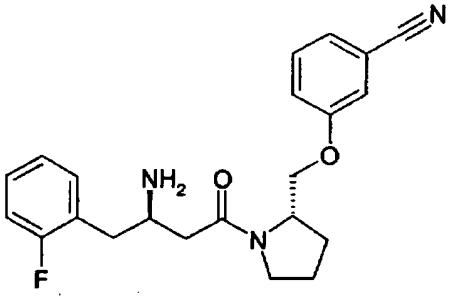
16. (Original) A compound according to claim 1 selected from the group consisting of

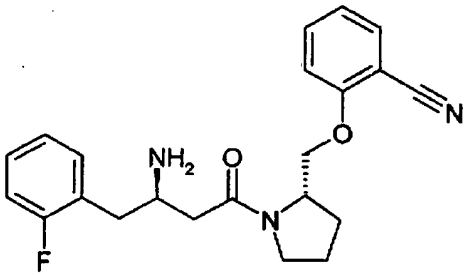




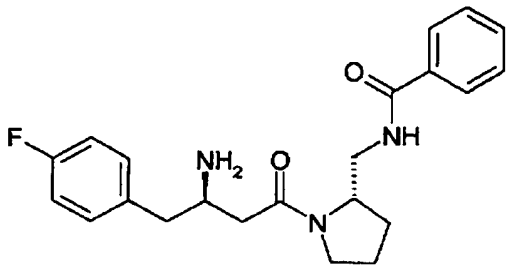


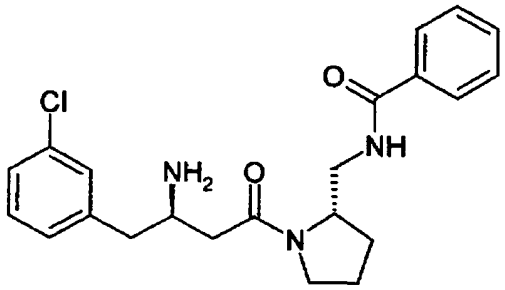


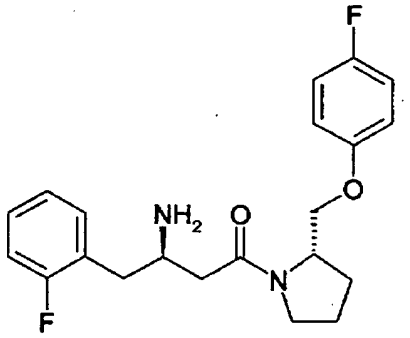


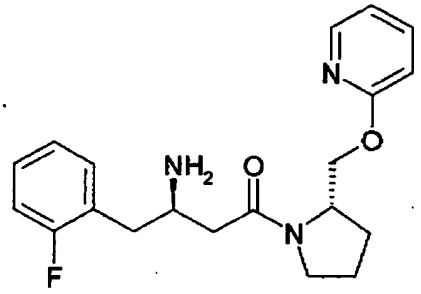


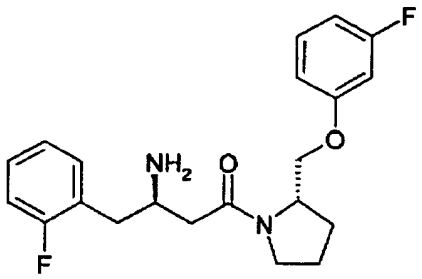
Supplemental Preliminary Amendment
U.S. Patent Application No. 10/582,054

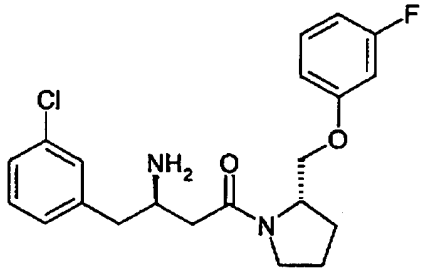


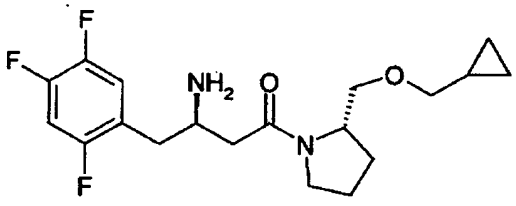


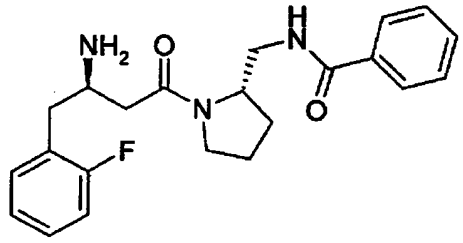


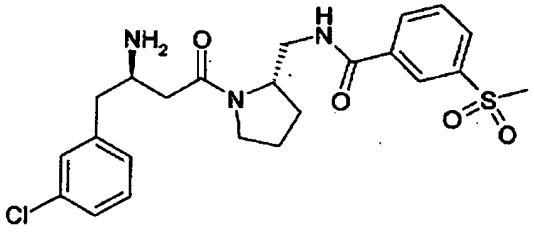


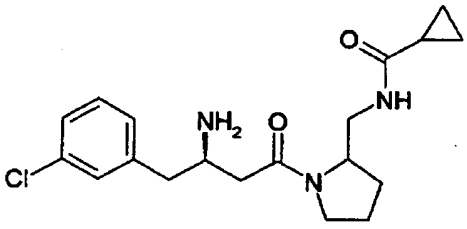


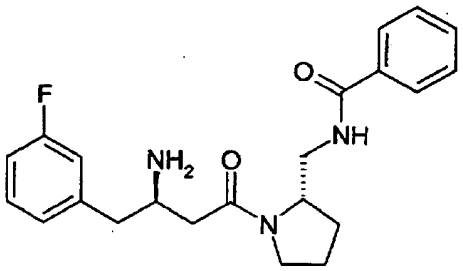


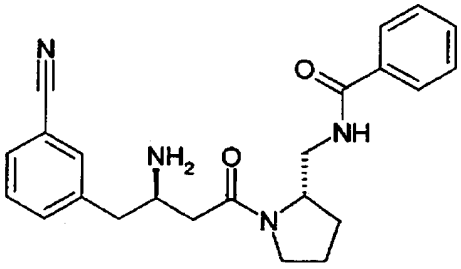


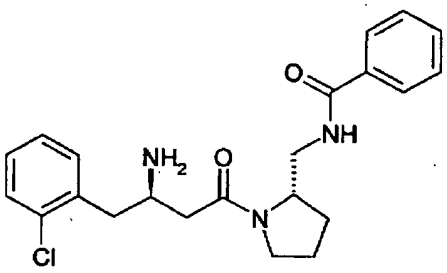


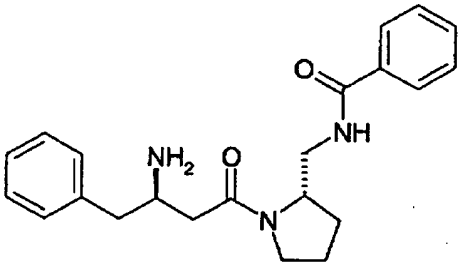


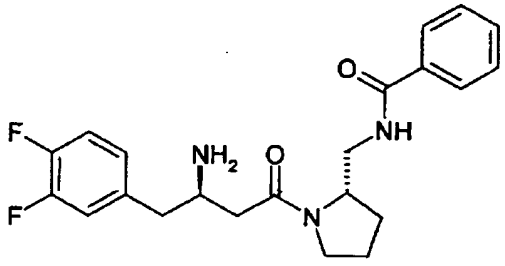


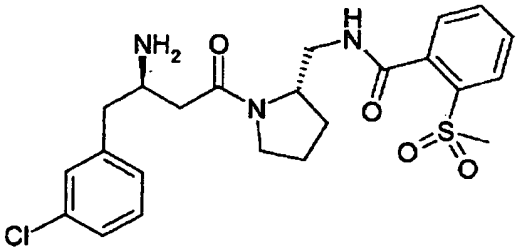




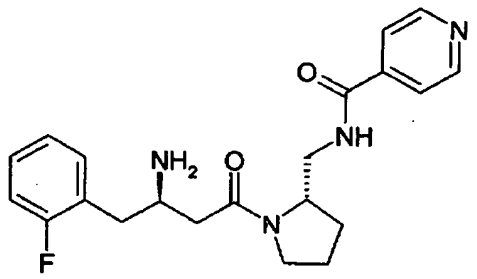


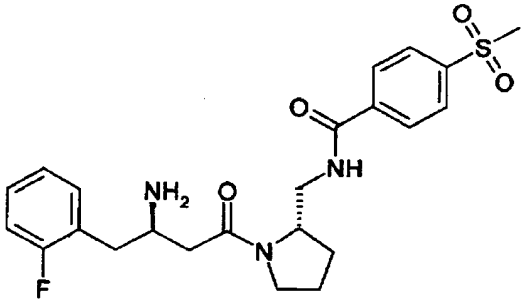


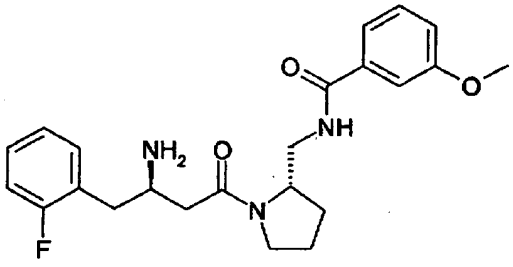


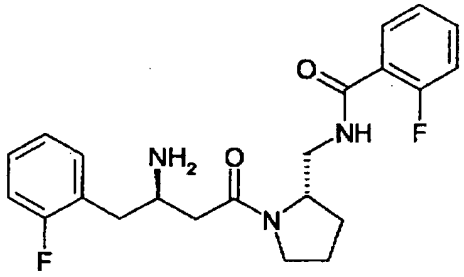


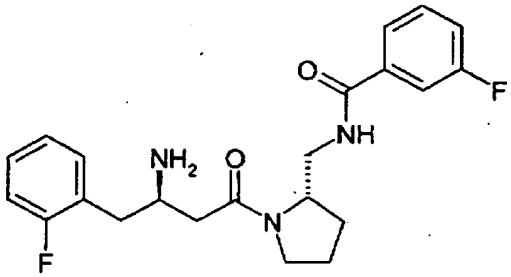
Supplemental Preliminary Amendment
U.S. Patent Application No. 10/582,054

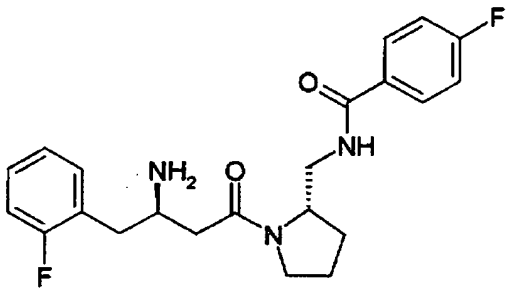


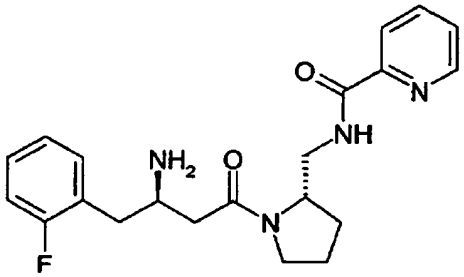


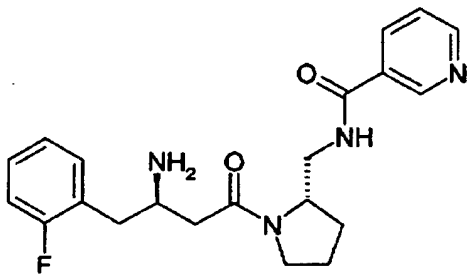




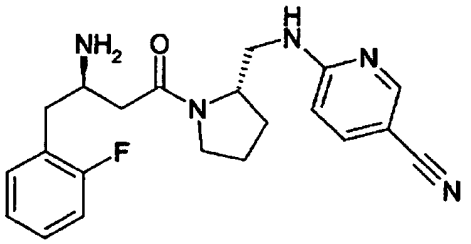


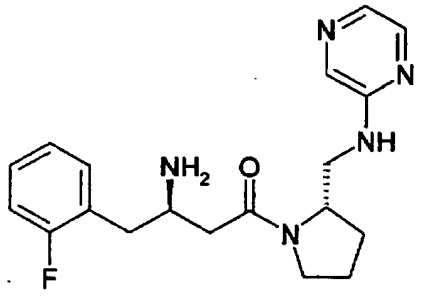


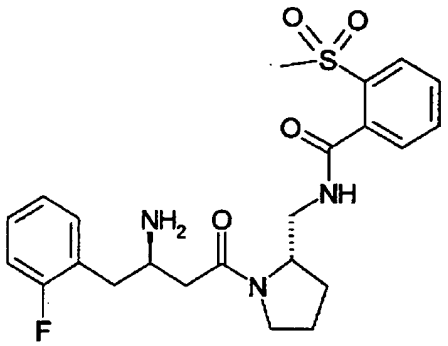


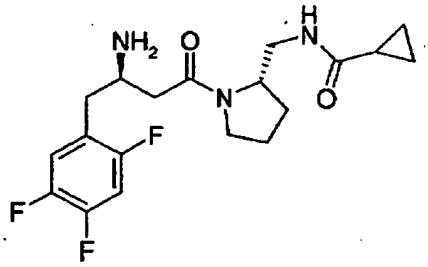


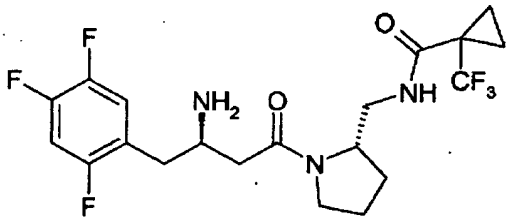
Supplemental Preliminary Amendment
U.S. Patent Application No. 10/582,054

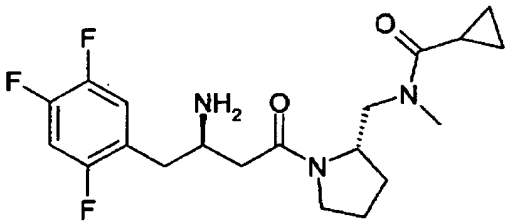


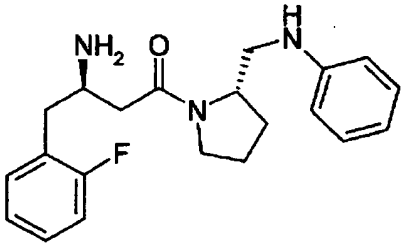


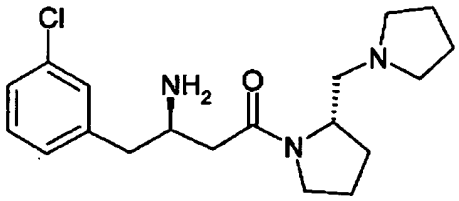












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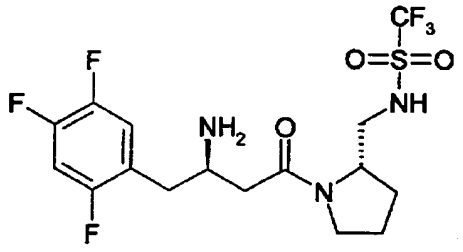

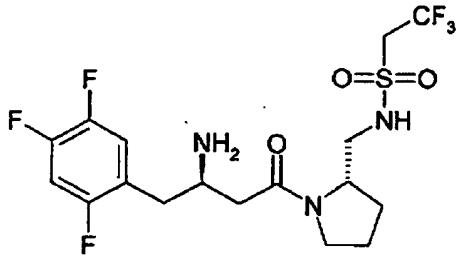

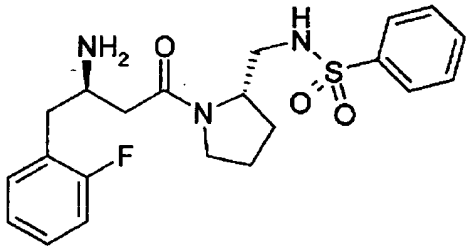

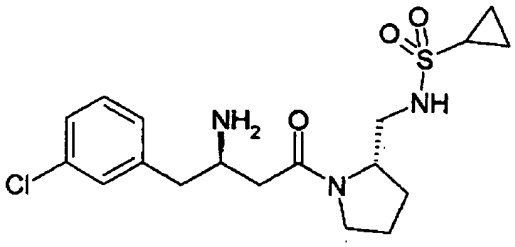

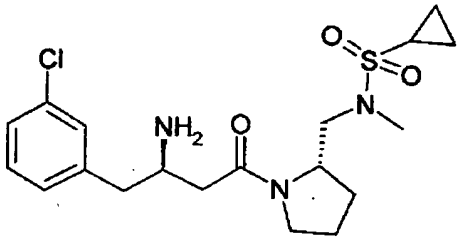

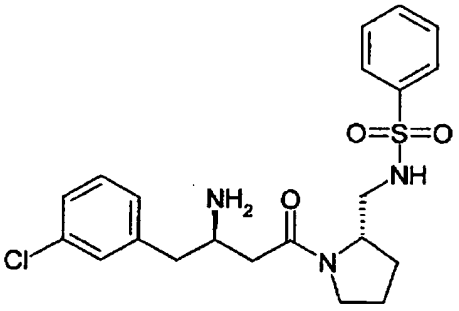

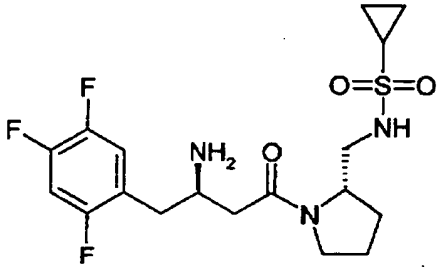

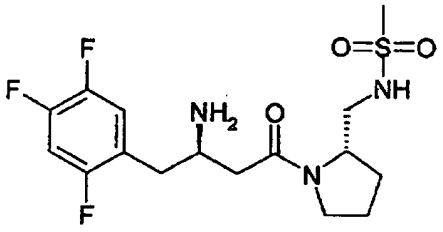

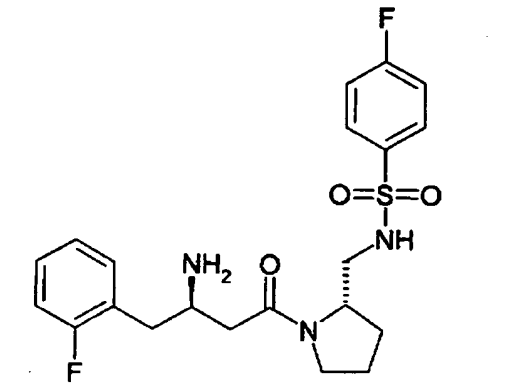

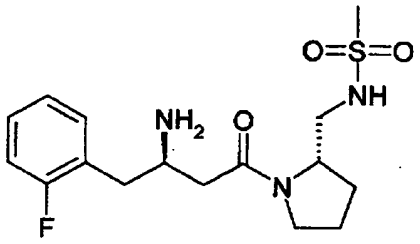

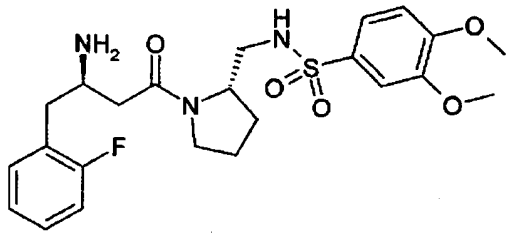

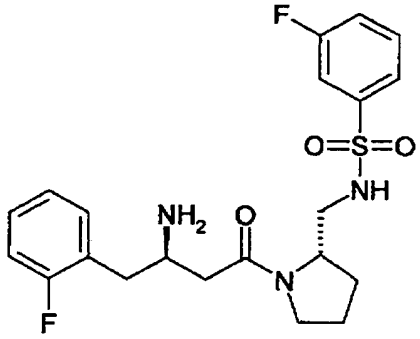

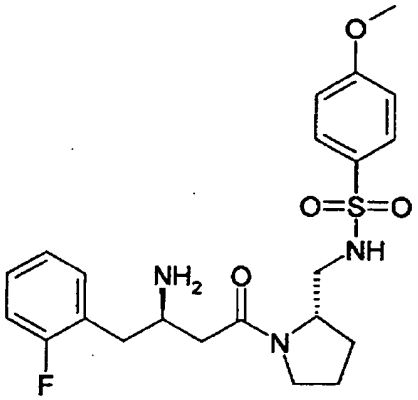

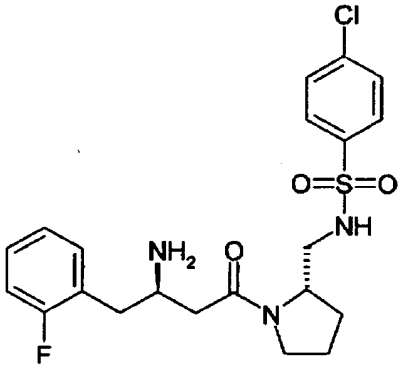

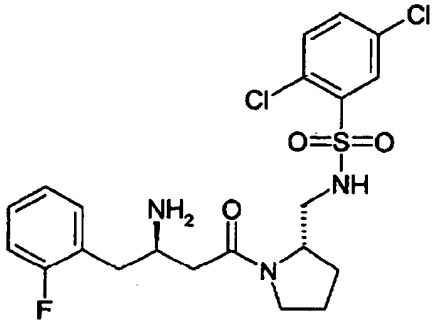

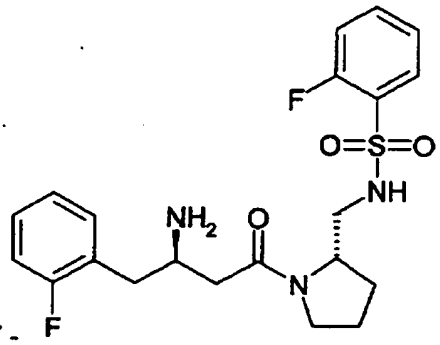

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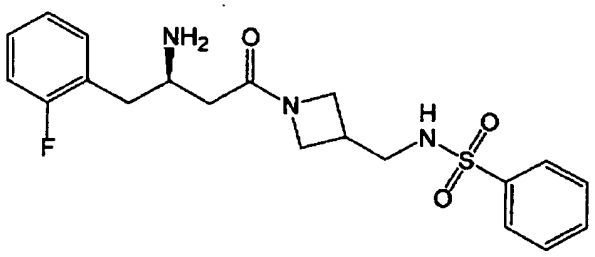

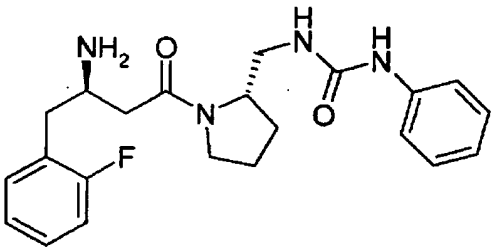

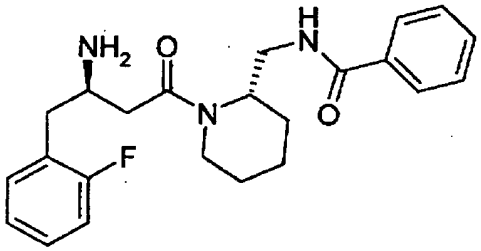

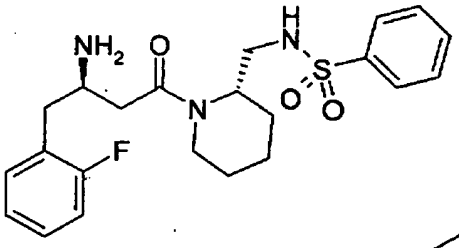

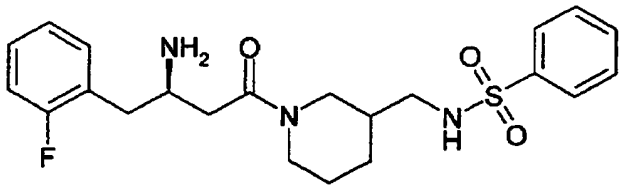

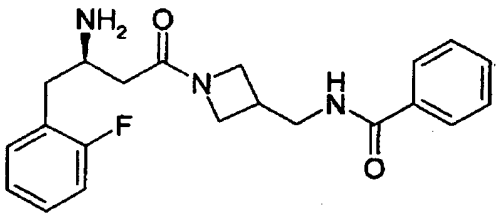

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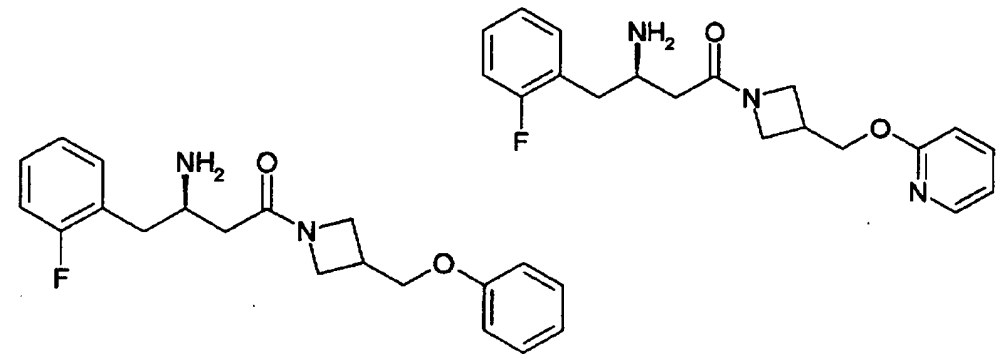
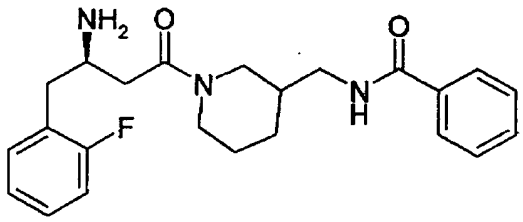
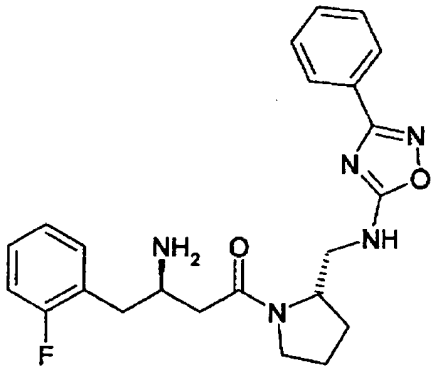
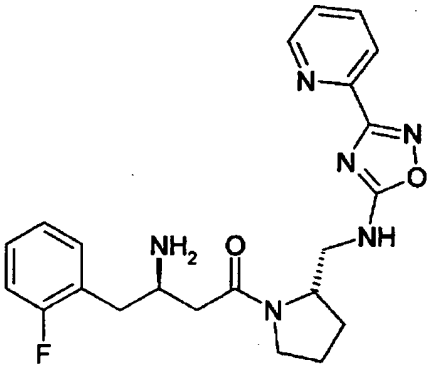
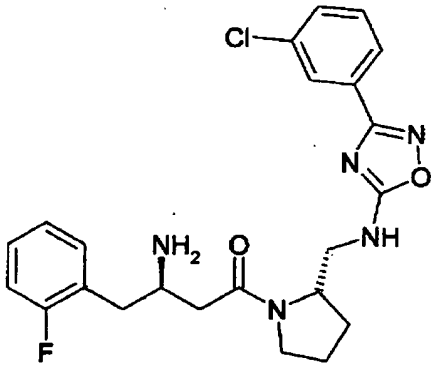
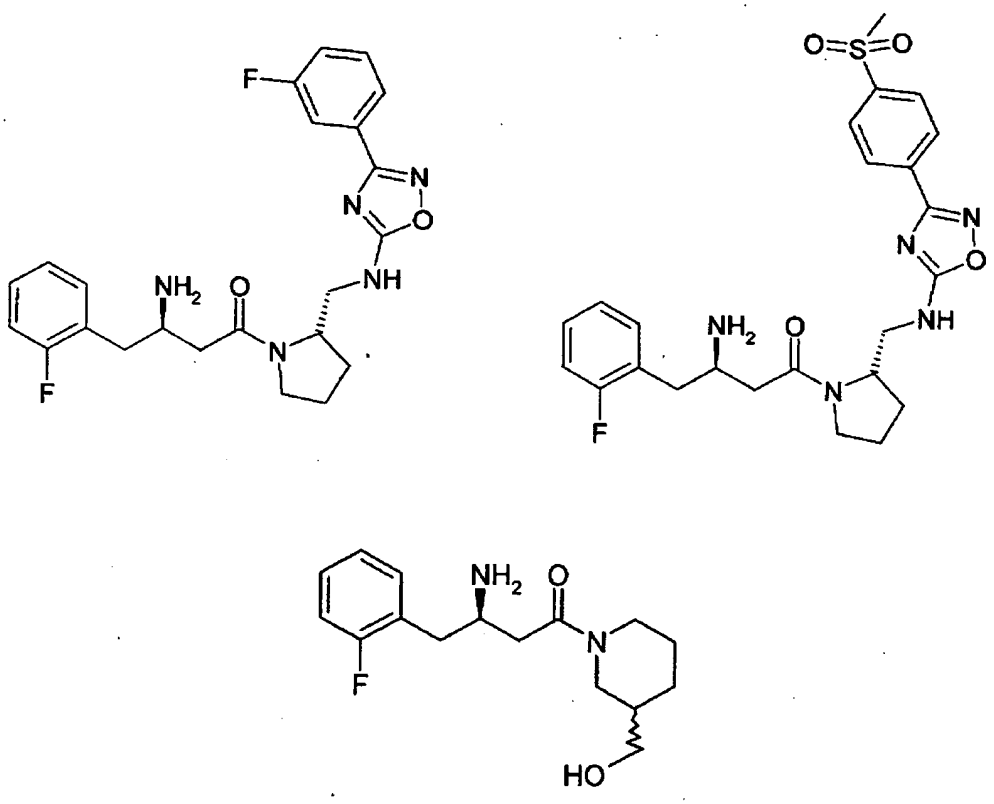












or a pharmaceutically acceptable salt thereof.

17. (Previously presented) A prodrug compound of a compound according to claim 1.

18. (Currently amended) A pharmaceutical composition comprising a compound or a pharmaceutically acceptable salt thereof or a prodrug thereof according to claim 1 together with a pharmaceutically acceptable carrier.

19. (Currently amended) A pharmaceutical composition according to claim 18, comprising one or more additional compounds or pharmaceutically acceptable salts thereof selected from the group consisting of another of said compound of formula (I), said pharmaceutically

acceptable salt thereof or a prodrug thereof; another DPP-IV inhibitor; insulin sensitizers; PPAR agonists; biguanides; protein tyrosinephosphatase-IB (PTP-1B) inhibitors; insulin and insulin mimetics; sulfonylureas and other insulin secretagogues; a-glucosidase inhibitors; glucagon receptor antagonists; GLP-1, GLP-1 mimetics, and GLP-1 receptor agonists; GIP, GIP mimetics, and GIP receptor agonists; PACAP, PACAP mimetics, and PACAP receptor 3 agonists; cholesterol lowering agents; HMG-CoA reductase inhibitors; sequestrants; nicotinyl alcohol; nicotinic acid or a salt thereof; PPARa agonists; PPARoly dual agonists; inhibitors of cholesterol absorption; acyl CoA : cholesterol acyltransferase inhibitors; anti-oxidants; PPARo agonists; antiobesity compounds; an ileal bile acid transporter inhibitor; and anti-inflammatory agents.

20. (Currently amended) A compound or a pharmaceutically acceptable salt thereof or a prodrug thereof of claim 1 for use as a medicament.

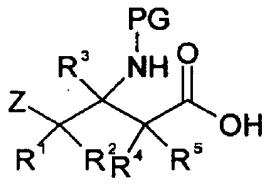
21. (Currently amended) A method ~~Use of a compound or a pharmaceutically acceptable salt thereof of claim 1 for the manufacture of a medicament~~ for the treatment or prophylaxis of non-insulin dependent (Type II) diabetes mellitus; hyperglycemia; obesity; insulin resistance; lipid disorders; dyslipidemia; hyperlipidemia; hypertriglyceridemia; hypercholestrerolemia; low HDL; high LDL; atherosclerosis; growth hormone deficiency; diseases related to the immune response; HIV infection; neutropenia; neuronal disorders; anxiety; depression; tumor metastasis; benign prostatic hypertrophy; gingivitis; hypertension; osteoporosis; diseases related to sperm motility; low glucose tolerance; insulin resistance; ist sequelae; vascular restenosis; irritable bowel syndrome; inflammatory bowel disease; including Crohn's disease and ulcerative colitis; other inflammatory conditions; pancreatitis; abdominal obesity; neurodegenerative disease; retinopathy; nephropathy; neuropathy; Syndrome X; ovarian hyperandrogenism (polycystic ovarian syndrome; Type n diabetes; or growth hormone deficiency, comprising administering to a subject in need of said treatment said compound or said pharmaceutically acceptable salt thereof or a prodrug thereof of claim 1.

22. (Currently amended) A method to inhibit ~~Use of a compound according to claim 1 as~~ DPP-IV ~~inhibitor~~ peptidase activity comprising administering said compound or said

pharmaceutically acceptable salt thereof or a prodrug thereof of claim 1 to a subject in an amount sufficient to inhibit DPP-IV peptidase activity.

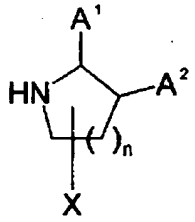
23. (Previously presented) Process for the preparation of a compound according to claim 1, comprising the steps of

- coupling of an amino-protected beta-amino acid of formula (IVa)



(IVa)

wherein PG is a protective group, with an amine of formula (III)



(III)

using standard peptide coupling conditions, reagents and protective groups;

- removing the protective group (PG).

24. (Original) A process according to claim 23, wherein the coupling reagents are 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride (EDC) in combination with 1-hydroxybenzotriazole (HOBt) and a base (triethylamine or diisopropylethylamine) or O-(7-azabenzotriazol-1-yl)-*N,N,N',N'*-tetramethyluronium hexafluorophosphate (HATU) in the

presence of a base and the protective group is 9-fluorenylmethoxycarbonyl or *tert*-butoxycarbonyl.

25. (Previously presented) A process according to claim 23, wherein the protective group is removed using diethylamine in dichloromethane in the case of 9-fluorenylmethoxycarbonyl or using acidic conditions in the case of *tert*-butoxycarbonyl.